

## Braving a New Life in the Old Dockyards – Towards an Integrated Approach

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### 1 ABSTRACT

The city of Ghent is a very interesting example of a city with a double relationship with its own water infrastructure. There are three main reasons for this relationship. Firstly, the main historical ground for the existence of Ghent along the water was purely out of living conditions and economic reasons (textile industry, water for drinking and canalization support...). Later, however, the polluted water infrastructure had to be filled up to make place for another economic reason: free mobility access for cars, extra parking and open space. The third - and fairly recent - reason is that the city council together with urban planners discovered the water-backbone again, and gave it a third life as the new generator for the city, as a way of making the city "full of pleasure, with open perspectives and open sustainable public spaces" again. Ghent shows how the city can reuse its inner structure and how the water structure can change the future of the city. Sustainable water infrastructure can truly be the basis for city evolution and urban planning.

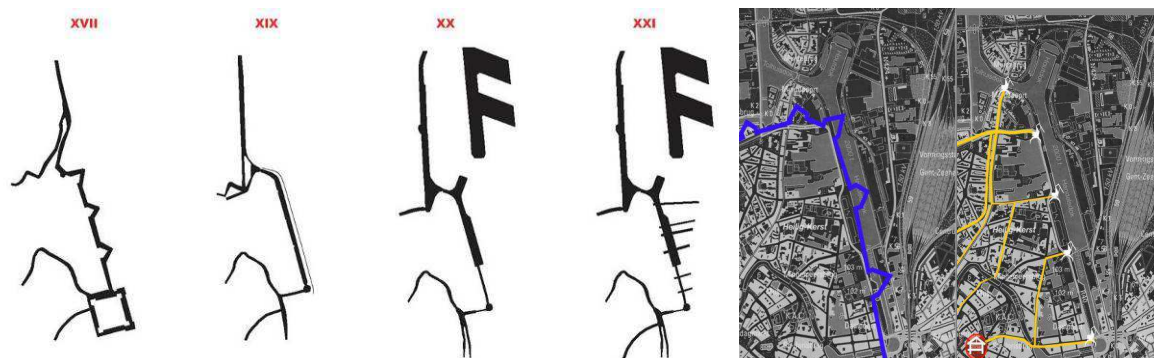
### 2 WATER IN THE CITY: A REDISCOVERY

#### 2.1 From windmills

The town of Ghent and its waters are inseparably bound, one unable to exist without the other. Already in the Roman period, the town started to grow around the confluence of the rivers Lys (in Dutch: Leie) and Scheldt (in Dutch: Schelde). Because of that, the Flemish name 'Gent' was derived from the Celtic word 'Ganda', which means 'confluence'.

By the 12th century, Ghent was rapidly growing into a flourishing city. The cloth trade, based on the import of English wool, flourished like nowhere else, and within a century Ghent had become an important industrial city. Until the 13th century, Ghent was the second biggest city in Europe, north of the Alps, preceded only by Paris. By the late 15th century, the cloth trade had begun to decline, but Ghent remained prosperous by shifting its economy to the shipping trade along the rivers Lys and Scheldt. In the latter part of the 15th century, however, the closing of the Scheldt brought commercial decline, not to be reversed until the revival of cloth working (processing? production?) during the industrial boom of the 19th century.

From then on, the cotton industry flourished and Ghent turned into one of the most important industrial centres of the French Empire. The Ghent-Terneuzen canal was constructed and Ghent continued to grow as an industrial centre. As water-borne traffic and port activities increased, the sea canal was extended several times. Also at that time, as industrial activities developed in the city centre as well as in the docks, windmills gave way big industrial cranes...



Images 1 and 2: The evolution of water infrastructure in Ghent (sogent)

#### 2.2 Through cranes

A century ago, filling in canals and bodies of water became an everyday affair – and there was every reason to do so. Cholera and tuberculosis were rife in deprived working class districts, diseases surely encouraged by the canals, which, in those days, functioned as open sewers. Water was a threat to public health. Besides,

many canals and waterways had lost their function as supply routes. Trains (and later, trucks) became far more important means of transport than shipping.

The danger was not only pollution, but also its unpredictability. In the 19th and early 20th centuries, water was a regular menace to the city as a result of high water levels. Moreover, after the Second World War, the number of cars rose spectacularly. 'Abolished' watercourses were filled in or vaulted to make room for new roads or parking lots. By filling in the Lower Scheldt (in Dutch: Nederschelde) in 1960, the historical confluence of Scheldt and Lys disappeared.

### **2.3 To bridges**

Already in the mid-1970s, attitudes were changing and respect for the role of water in the city was only growing. For example, in the last couple of decades, significant investments have been made in water treatment, with the construction of a comprehensive collector plan, which drains the sewage waters to a purification unit and no longer into the rivers. From the end of the 20th century on, lost canals and ports fallen into disuse were revalued. The city authorities started to realise that city watercourses had tourist and economic value, and might have a sustainable significance for the historical city, which could help improve the quality of life. In short: water could render the public space more attractive, thereby enhancing the city's economic position.

## **3 URBAN TRANSFORMATION: WATER AS A SPATIAL BEAM**

### **3.1 Spatial Structure Plan of Ghent**

During recent years, Flanders has introduced structure planning as an important opponent to the functional zoning in the planning. This is an important tool for the city policy to provide strategic choices and actions in the planning. At the same time, the structure plan is very helpful for safeguarding and realising the long-term visions. Ghent had the same needs as elsewhere in Flanders, and they were very quickly translated into the Spatial Structure Plan of Ghent. The plan was published in 2003 and made legally binding by decree of the Flemish Government. It consists of balanced choices to ensure a sustainable and qualitative spatial development.

With a focus on spatial elements and key issues, the plan provides vision and certainty for all actors over the short- and (mid)long-term. It has no direct effect on citizens and is tuned to structural plans on other levels, such as Flanders and the province.

Obstacles (with which the plan had to deal included: a lack of green spaces on different levels, outflow of residents from the city, too densely built 19th century belt neighbourhoods, the majority of buildings in poor condition, a lack of zones for economic activities, underused train stations and the public transport network.

Despite the fact that long-term visions usually need a lot of time to be realised, the Spatial Structure Plan for the City of Ghent has certainly become a successful tool for accelerating the strategic policy decisions as well as the application of the visions. Several of the Structure Plan's targets and ambitions became real priorities in the political planning and, thanks to that, the image of Ghent is now progressing day by day. Policy priorities (this is the strategic content of the plan) focus on developing green areas, re-developing the city and its districts, and developing a railway station site. But one of the main new visions was the way to transform water structure into the main spatial beam and leading factor. The city government describes its vision on water as follows: "The water and the confluence of the Lys and Scheldt rivers form the basis of the origin of Ghent. Still now, water remains an important structuring element for nature, economics (port, Ring Canal) and parts of the scenery in and around the city. Although it has been quite affected in the past (by filling in, vaulting, canalization, pollution) and though it may have become less functional, water in Ghent is still very present, compared to all other big Flemish cities (except Bruges).

These chances should be taken to their full extent, in order to strengthen the functioning of the city in several areas and to emphasize the typical character of Ghent as a 'city of water'. Stad Gent, 2003, Ruimtelijk Structuurplan Gent.

### **3.2 Opening of the Lower Scheldt watercourse**

The Lower Scheldt project is a perfect illustration of the renewed respect for the recreational, economic and historical value of water in the city.

Already in 1885, part of the waterway was covered, in order to secure a smooth link between the former South railway station and the city centre and to create a new town square. In the 1960s, because of city forming and water pollution, the remaining part was filled in up to the Lys estuary, except for a small section at the Castle of Gerard the Devil. As a consequence, it was no longer possible to take a full boat tour. In the southeast, boats sailing the Lys had to turn around at the point where the Lower Scheldt had been filled in.

At the beginning of this century, the city of Ghent set objectives to restore the broken connection between the Lys and Scheldt rivers, to provide pleasure craft passage through town, combining this with re-zoning the public space and building a marina. Already around the year 2000, Ghent started restructuring the Portus Ganda marina area to be situated at the historical cradle of Ghent, the Lys and Scheldt confluence and Saint Bavo's Abbey. The Rodetoren Quay would be stepped, making it an ideal spot to relax with a view across to the Veer Quay, which would be extended with wooden jetties and boardwalks, while the surrounding area was being enhanced with present-day street furniture. On 30 April 2005, Ghent's fourth marina was officially opened. Meanwhile, an extensive part of the Lower Scheldt has already been uncovered. And more recently, on 18 February 2008, the Bavo, Nieuw and Wijdenaard Bridges were officially opened.

## 4 THE OLD DOCKYARDS PROJECT: TOWARDS AN INTEGRATED APPROACH

### 4.1 Introduction

Not only is the value of water being restored in the very centre of the city, the dockyards area to the north of the centre is also heading for a major transformation during the next 20 years. The Old Dockyards Project (in Dutch: Oude Dokken) will radically change the looks and the function of an entire area of the city. The aim of the Project is to re-develop the former harbour area called Old Dockyards and to enhance the liveability and employment in the neighbourhood.

### 4.2 Situation and history

The Old Dockyards area is situated around the city's three oldest docks (the Achter, Handels and Hout docks), just outside the historical city centre, between the 19th century belt of the city and the railway station environment.

In the Middle Ages, this area already had a strategic position: for a long time, it was a wasteland that could be flooded very quickly to protect the city against enemies. In 1829, after the cranes replaced the forts and windmills, the first dock was built – the Handels Dock – parallel to the fortress and the moat. During recent years, because of expansion of the port, the harbour and its economic activities were moved to the north area of the city, around the Ghent-Terneuzen canal. As a consequence, the Old Dockyards area became neglected, harbouring outdated factory infrastructures with inadequate equipment, daily traffic jams, a scarcity of green areas and public spaces, etc.



Images 3, 4 and 5: Aerial view of the Old Dockyards (sogent) and the Handels and Hout Docks (City of Ghent archives)

This evolution was caused by two elements: the enlarged scale of the harbour activities (larger ships, more containers, etc.) and the transformation of the industry onto a more global level. While production was being moved away from Europe, the focus on high-tech production and various services grew. Moreover,



waterways are no longer often used for production ends. As the area is situated near the historical city centre, it is easy to reach and full of potential for future developers. All this together – an empty area, without any function and pretty much futureless, but at the same time with an extraordinary character, soul and so much potential – convinced the city council to look for a sustainable evolution: the Old Dockyards Project was born.

### 4.3 Quality of urban planning and design

Years ago, the port of Ghent was located in the area of the Old Dockyards, located to the east of the historical city centre. However, the port activities gradually moved to the new municipal port, north of the city. Little by little, the grounds of the Old Dockyards (ca. 25 ha) were transformed into a real no-man's land, with a few scattered buildings, a couple of sheds and two industrial cranes.

From the remnants of a rich industrial past, a brand-new vivid quarter is now arising, a place where old and young inhabitants of Ghent will be able to live near the waterfront and in a green environment. The challenge for Ghent is to create this place based on sustainable and water-sensitive urban planning and re-using the numerous heritage elements.

Approximately 1500 housing units will be constructed, fulfilling the promise to deal with housing shortage. Modern houses will offer something to everybody's taste. Juniors and seniors, couples and large families, everyone will certainly find a place and be able to contribute to a cosy neighbourhood. There will also be enough room for offices, shops, recreation, culture and nature. The additional public services (elementary school, day care centre, neighbourhood sports hall), the extension of the public transport network, bicycle and pedestrian bridges, and high-quality public areas will also give the surrounding quarters, and the entire city, a strong impetus for renewal.

### 4.4 Main actors in the initiative

In 2003, the Ghent city council took decisive action by including a vision for the area in the Spatial Structure Plan for the city: “an approach of social, economic and physical rejuvenation of the Old Dockyards would lead to the development of an area of mixed use, a new, sustainable, mostly residential urban quarter.”

The development of the Old Dockyards project is being supervised through a partnership between the City of Ghent and the Autonomous Municipal Ghent Development Authority (in Dutch: sogent), an operational agency owned by the City of Ghent.

Obviously, in a project of this complexity, a lot of other partners play important roles:

- Waterways and Sea canal (Flemish Government, construction of bridges for pedestrians and cyclists, and renovation of quay walls)
- AWV (Flemish Government, construction of motorways)
- Ovam (Flemish Government, mediation of soil)
- Private developers (Public Private Partnership to realize the project)
- A lot of corporations and links with universities and research institutes, collaborative networks and global relationships.

### 4.5 Financial aspects

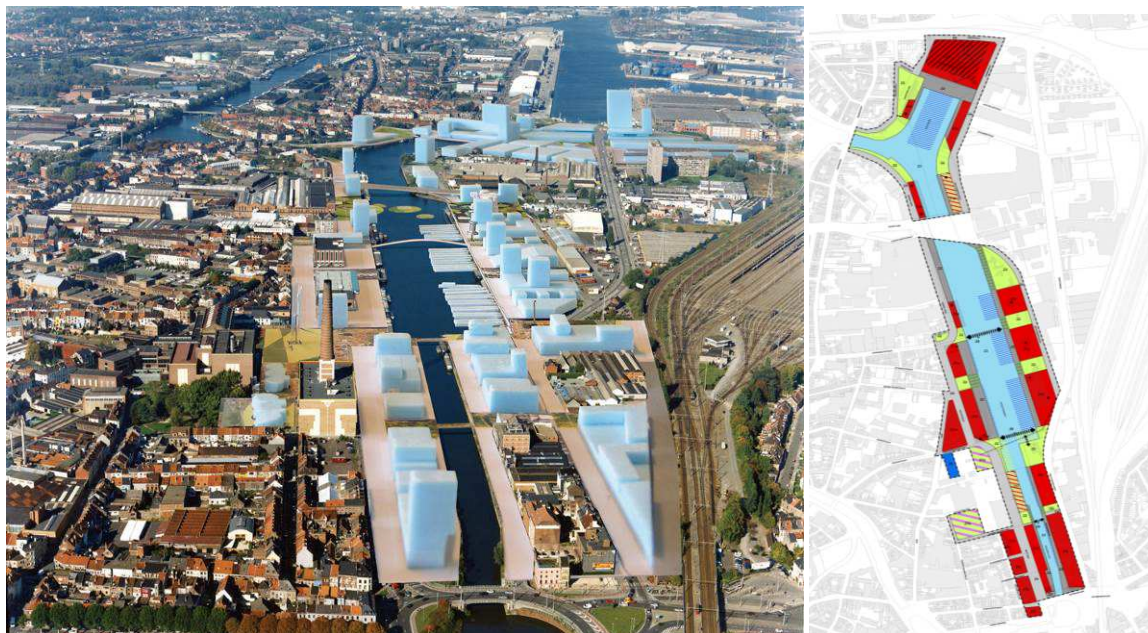
Due to the complexity of the project, it is very hard to name an exact amount of money involved. The project is made possible thanks to numerous subsidies: the European Fund for Regional Development, the Flemish Fund for City Renewal, the Federal Urban Policy, and more. The City applies for different subsidies for all possible sub-projects and aims to break even. But the main opportunity is the fact that sogent owns more than 80% of the grounds, and thus can set high standards for the project development at all levels and demand creation of a highly sustainable environment.

For example: in the year 2008, eight cities in Flanders and the Netherlands, all of which planned to transform their former industry ports, joined forces. In the context of the European Interreg IV A-project ‘Revitalization of Old Industry ports’ (ROI), they all received a European fund for the realization of one part of their project (in Ghent, this was building the first bridge for cyclists and pedestrians). Besides that, they created a platform which made it possible to exchange knowledge about all aspects of city development in

former industrial areas. The City of Ghent, in cooperation with Ghent University, was the leading partner of this project. More information: [www.roi-project.be](http://www.roi-project.be)

#### 4.6 Master planning by OMA

In 2004, the Ghent Development Authority organized a European urban design competition for the Old Dockyards Project – the Office for Metropolitan Architecture (OMA), from Rotterdam in the Netherlands, won. While historically the North-South alignment of the dockshad always been a dominant factor of the site, OMA proposed to rotate the structure into a transverse position, opening the views up to the waterfront and the city beyond, and adding new transverse canals. This initiated a new vision towards the evolution of waterfront areas. While in other cities the expansion line is actually visible and high buildings are erected along the waterline, OMA's master plan proposed a sustainable connection with the second plan – the 'B' and 'C' areas – situated further away from the docks – by transverse orientation. Making this opening inland restarted the discussion about the future of the whole area further away from the 'golden waterside'. This was an important moment: it became clear that extra studies about the entire area were necessary. OMA's master plan included three zones whose evolution could be proposed: the 'A', 'B' and 'C' areas. At present, sogent is developing the 'A' area; a new spatial structure plan is in preparation for the 'B' and 'C' areas.



Images 6 and 7: Aerial view of the Master Plan (OMA) and the Spatial Structure Plan (City of Ghent archives)

#### 4.7 Waterfront: a dream for the developer or for the citizen?

Because of this new policy, the concept of the waterfront in Ghent will be different than in other cities. The focus is not on financial aspects, but on creating a liveable and vibrant new city district by fulfilling the needs of the city's inhabitants. This means that the green areas will support the needs of the new dwellings, but will also provide a solution to the lack of green in existing dwellings; and houses for families will be the first priority, which means fewer high-rise buildings and more one-family units. Also very important is the creation of a social network by providing playgrounds, a school and kindergarten, multi-functional halls for youngsters, a library for the quarter, and so on. For once, the sky is not the limit...

Every 19th century city should be grateful for such an evolution. The key success factor for the realization of the Old Dockyards Project is general water management, involving the reorientation of the boat moorings, the creation of a new yacht harbour for tourism, the innovative stabilisation of the quays (12 different types of embankments, with a total length of nearly 5 km), creating the new 'harbour' for houseboats and new parks on the water level.

Other important factors are the transformation of the accessibility of the Old Dockyards Project and the creation of sustainable new public spaces. Various transport solutions are required to transform the accessibility of the Old Dockyards Project. To increase liveability, the city ring road will be re-located and the new 'Verapaz' bridge will be constructed in 2018. The new walking and cycling bridge (Batavia bridge)



is already constructed, and two more will follow in the next few years. Furthermore, plenty of new open spaces, parks, urban squares, playgrounds and sports areas, water promenades, etc. have to be modelled.

Our main aim is to create a successful waterfront project for the coming generations. This means that the issue of sustainability is very important in the Public Private Partnerships. All Public Private Partnerships are competitions – the project with the highest level of quality and long-term vision will win. It's not only a matter of building passive houses, we are asking for innovation in sustainability – for example, by capturing heat from dish- and clothes-washing water, by producing bio-gas based on faecal water, creations of the smart city grid, and so on. The first PPP for the development of 400 dwellings on the eastside of the Handels Dock subscribes to those ambitions. Another innovative idea was to choose the consortium of developers and architects by organising a “dialogue café” for more than 100 inhabitants of Ghent, who discussed the project together and listed their pro's and con's per project. For such an open “people referendum” to be held in Belgium was quite unusual.



Images 8 and 9: Aerial view of the first PPP project by cvba Schipperskaai, and a “dialogue café” (City of Ghent archives)

#### 4.8 Innovation, creativity and uniqueness of the Batavia bridge

Considering the fact that the three bridges will be the focal point for all citizens entering the new district, an ambitious design, in close relation with the maritime history if the site, was needed. Apart from that, inland navigation has to remain possible with the bridges in place, without breaking the continuous connection with the inner city for bicycles and pedestrians.

Dietmar Feichtinger Architectes from Paris submitted the winning design for the three bridges. The design concept is based on the idea of a jetty in steel and wood that links both sides of the water and forms an extension of the public space. To allow vessels to pass underneath the bridge, the central part is raised, whilst still letting bicycles and pedestrians cross safely. This answered the city's request for an ambitious and appealing design that acts as a (tourist) attraction for the city. At the same time, by applying quite new techniques, this is innovative bridge design. The Batavia bridge opens very slowly, so that everyone can continue to use the bridge. Also, when it is in the open position, it is still accessible because the slope of the parts rising to the lifting table increases from 0% to 9%.



Images 10, 11 and 12: The opening of the Batavia bridge and the renovated quay wall at the Handels Dock (City of Ghent archives and sogent)

#### 4.9 Innovation, creativity and uniqueness of the quays

The renovation of the unstable quay walls is a very difficult issue technically, in addition to being very expensive. In cooperation with the Flemish Waterway Manager, sogent decided on a design with high ambition: the new quay wall at the Handels Dock provides a new pedestrian promenade (more than 600 meters long) and provides the first inhabitants of the Old Dockyards with a modern mooring structure – the

34 houseboats have all necessary utility services; the new quay wall at the Hout Dock provides a new pedestrian promenade (more than 400 meters long) at the water level, and a slipway makes a new marina possible.



Images 13, 14 and 15: The construction of the quay wall at the Hout Dock, and two futuristic views (City of Ghent archives and sogent)

#### 4.10 Innovation, creativity and uniqueness in re-use of heritage

Another interesting part of the plan is the commitment to maintain the historical character of the area by re-using elements of the architectural and industrial heritage. The strongly industrial scenery will evolve towards a new municipal scenery that owes its character to the port.

Four cranes, one yellow and three blue, will always be part of the skyline. A former concrete plant will be largely preserved and will receive a new function as part of the largest park in the area. The remaining typical tracks for the goods carriages and the ship bollards will be integrated as much as possible in the layout of the new public spaces. Furthermore, a range of additional maritime industrial elements – from anchors to old train wagons – will be re-introduced into the public spaces of the Old Dockyards. The intention is to create a touristic industrial route and, at the same time, provide some game incentives for children.

A very specific project, in terms of heritage and cohesion, is the renovation of a series of disused gravel tanks, formerly used for transferring gravel and sand between ships and trucks. By means of some limited interventions, a team of a young architect and an artist transformed this area into a unique multi-purpose public space. Today, the setting is a hotspot for youngsters, artists and people from the neighbourhood.

More information: <http://www.wallpaper.com/architecture/rotor-installation-at-the-grindbakken-warehouse-in-ghent/6103>.



Images 16, 17 and 18: The re-construction of the gravel tanks and two futuristic views (City of Ghent archives and sogent)

#### 4.11 Innovation, creativity and uniqueness – temporary uses

Between the making of the plans and the effective realization of the project, years are going by. The City of Ghent has given special attention to the temporary use of grounds and buildings during these periods. Certainly in the Old Dockyards, where a whole new living area is rising amidst existing surroundings, this aspect of the development is extremely important. By offering all kind of happenings for the neighbourhood and for Ghent's inhabitants – including films, exhibitions, theatre, sports, a city farm, urban agriculture, flea markets, handicrafts, and so on – the Old Dockyards has already become an integral part of the city. Today, the neglected dock area is alive and now on the mental map of the inhabitants. At the same time, it offers enormous opportunities in terms of communication. In a pleasant way, the City of Ghent can inform all visitors about future plans.

More information: [www.oudedokken.be](http://www.oudedokken.be), [www.dokgent.be](http://www.dokgent.be), [www.de-stadstuin.be](http://www.de-stadstuin.be) and [www.019-ghent.org](http://www.019-ghent.org).





Images 19, 20, 21, 22, 23, 24 and 25: Some examples of the temporary use of the Old Dockyards area in 2013 (City of Ghent archives and sogent)

## 5 CONCLUSION



Images 26 and 27: Two futuristic views of the Old Dockyards (sogent)

Between the making of the plans and the effective realization of the project, years go by. The City of Ghent has special attention for the temporary use of grounds and buildings during these periods. By offering film, exhibitions, theatre, sports, meeting places... for the neighbourhood and for Ghent's inhabitants, the Old Dockyards already become a part of the city. At the same time, it offers enormous opportunities in terms of communication.

The Old Dockyards project is a fine example of a transformation of an abandoned brownfield area into a new living area for mixed use, all that with great respect for the maritime and industrial past of the location.

The results of the project will be miscellaneous. Current inhabitants of the city as well as possible new ones get the chance to live in a unique atmosphere: near the water, surrounded by green, and within walking distance of the old city centre. Smart interventions in terms of mobility and ecological sustainability will make the Old Dockyards a real part of the "smart-city".

## 6 REFERENCES

- Feyen Jan: Urban Water Conference. Leuven, 2008
- Holzer Christoph: Riverscapes: Designing Urban Embankments, 2004
- Huisman, Jaap: Water in Historic City Centres, Ghent, 2007
- National Geographic: page 114, Nov/Dec 2008
- Stad Gent: Ruimtelijk Structuurplan Gent, Ghent, 2003
- Stad Gent: From medieval port to urban meeting place, Ghent, 2002